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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: T. IDO, et al

Serial No.: 10/784,999

Filed: February 25, 2004

For: STORAGE SYSTEM, BACKUP SYSTEM AND BACKUP METHOD

REQUEST FOR RECONSIDERATION
UNDER 37 CFR 1.102(d) and MPEP. §708.02, VIII

MS Petition
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

August 30, 2005

Sir:

Applicants hereby renews its Petition to make this application **Special** previously submitted on June 23, 2005, in accordance with 37 CFR §1.102(d) and MPEP 708.02, VIII. The June 23, 2005 Petition was denied by a Decision issued on July 20, 2005 in which the Petitions Examiner stated that the June 23, 2005 Petition failed to provide a detailed discussion of the distinct features of the claimed subject matter over certain ones of the references, namely Honma et al (U.S. Patent Application Publication No. 2004/0073675) and Ferrari et al (U.S. Patent Application Publication No. 2004/0078419).

It should be noted that the June 23, 2005 Petition contained an error being that it inadvertently listed Ferrari as a reference being most closely related to the subject matter encompassed by the claims when in fact it is not. The Ferrari reference was merely being cited as a reference of general interest and as such should only have been listed on the Information Disclosure Statement filed June 23, 2005. Therefore, the

Ferrari reference is being removed from the listing of references deemed most closely related and as such a detailed discussion thereof is not needed nor is it provided by the present Request for Reconsideration.

As noted in the Decision, the June 23, 2005 Petition should have included a detailed discussion on how the claimed subject matter is patenably distinct over the Honma reference. Such a detailed discussion is provided in the present Request for Reconsideration.

In the Decision, it was noted that the June 23, 2005 Information Disclosure Statement did not list all of the references that may have been discussed in the June 23, 2005 Petition. The June 23, 2005 Information Disclosure Statement is being resubmitted so as to list all of the references that have been cited as references deemed not closely related to the subject matter encompassed by the claims and references of general interest. Entry of the Information Disclosure Statement filed on even date herewith and consideration of the references cited therein is respectfully requested.

The present Request for Reconsideration incorporates by reference the June 23, 2005 Petition and provides additional details regarding the claims and how the claimed subject matter is patentable over the references. The present invention is a new application filed in the United States Patent and Trademark Office on February 25, 2004 and as such has not received any examination by the Examiner.

(B) All claims are directed to a single invention.

If the Office determines that all claims are not directed to a single invention, Applicant will make an election without traverse as a prerequisite to the grant of

special status in conformity with established telephone restriction practice.

(C) A pre-examination search has been conducted.

The search was directed towards a storage system. In particular, the search was directed to a storage system including a first storage unit for storing information from a first server, a second storage unit for storing the information stored in the first storage unit, and a storage controller coupled with the first storage unit, the second storage unit, the first server, and the second server and being used to control the first and second storage units. According to the present invention, when an instruction for splitting is received from the first server, the storage controller reports an end of the splitting to the first server, receives an instruction for backup from the second server and then transfers information to a backup device from the second storage unit after copying information from the first storage unit to the second storage unit ends.

Applicants hereby submit that a pre-examination search has been made by a professional searcher.

The field of search covered:

Class	Subclasses	Description
707/		DATA PROCESSING: DATABASE AND FILE MANAGEMENT OR DATA STRUCTURES
	202	·· Recoverability
	204	·· Archiving or backup
709/		ELECTRICAL COMPUTERS AND DIGITAL PROCESSING SYSTEMS: MULTICOMPUTER DATA TRANSFERRING OR PLURAL PROCESSOR SYNCHRONIZATION
	201	· Distributed data processing
711/		ELECTRICAL COMPUTERS AND DIGITAL PROCESSING SYSTEMS: MEMORY

	114	···· Arrayed (e.g., RAIDs)
	161	·· Archiving
	162	··· Backup
714/		ERROR DETECTION/CORRECTION AND FAULT DETECTION/RECOVERY
	6	····· Redundant stored data accessed (e.g., duplicated data, error correction coded data, or other parity-type data)

Additionally, a computer database search was conducted on the USPTO systems EAST and WEST.

(D) The following is a list of the references deemed most closely related to the subject matter encompassed by the claims:

U.S. Patent Number	Inventors
5,544,347	Yanai et al
6,643,667	Arai et al

U.S. Patent Application Publication No.	Inventor(s)
2004/0010732	Oka
2004/0044744	Grosner et al
2004/0073675	Honma et al

(E) It is submitted that the present invention is patentable over the references for the following reasons.

It is submitted that the cited references, whether taken individually or in combination with each other, fail to teach or suggest the invention as claimed. In particular, the cited references, at a minimum, fail to teach or suggest as recited in the claims:

a first feature of the present invention as recited in independent claim 1, wherein an instruction for splitting is received from a first server, the storage controller reports end of the splitting to the first server, receives an instruction for

backup from the second server, and then transfers information to a backup device from the second storage unit after copy of information from the first storage unit to the second ends;

a second feature of the present invention as recited in independent claim 5, including steps of causing a first server to issue an instruction for splitting to the storage controller, then causing the storage controller to report end of the splitting to the first server and then, when an instruction for backup is received from the second server, transferring information from the second storage unit to a backup device after end of copy of the information from the storage unit to the second storage unit;

a third feature of the present invention as recited in independent claim 9, wherein when the storage controller receives an instruction for splitting from the servers, end of splitting is reported to the servers, an instruction for backup is received from the servers, then information is copied from the first storage units into the second storage unit, and after the end thereof the information is transferred from the second storage unit to the backup device; and

a fourth feature of the present invention as recited in independent claim 14, wherein a first control portion connected with the memory accepts splitting processing sent from a first server and reports end of splitting to the first server, and a second control portion connected with the memory accepts backup processing sent from a second server after the report of end of the splitting.

To the extent applicable to the present Petition, Applicants submit that although the distinguishing feature(s) may represent a substantial portion of the claimed invention, the claimed invention including said feature(s) and their inter-operation provides a novel storage system and system and method related to or

implemented in or by said storage system not taught or suggested by any of the references of record.

Further, the cited references fail to teach or suggest the above noted features of the present invention when taken in combination with other limitations recited in the claims.

Yanai et al. (U.S. Patent No. 5,544,347), provides for a Data Storage System Controlled Remote Data Mirroring with Respectively Maintained Data Indices. Disclosed as per Fig. 1 is a system that controls storing of primary data received from a primary host computer 12 on a primary data storage system 14 and controls the copying of the primary data to a secondary data storage system controller 44 which forms part of a secondary data storage system 46 without intervention from the primary host computer 12. Once the primary data has been received or stored on the secondary data storage system 46, the secondary data storage system controller 44 provides an indication of receipt to the primary data storage system 14. High speed, point-to-point communication links between the primary and secondary data processing system controllers 16 and 44 are included (see Fig. 1; and column 2, lines 38-44).

Yanai as described above simply discloses a data storage system that controls storing of primary data received from a primary host computer on a primary data storage system and controls the copying of the primary data to a secondary storage controller which forms part of a secondary storage system without intervention from the primary host computer.

However, at no point is there any teaching or suggestion in Yanai of the above described features of the present invention as recited in the claims wherein, when an instruction for splitting is received from the first server, the storage

controller reports an end of the splitting to the first server, receives an instruction for backup from the second server and then transfers information to a backup device from the second storage unit after copying information from the first storage unit to the second storage unit.

More particularly, Yanai at a minimum does not teach or suggest the above described first feature of the present invention as recited in independent claim 1, the above described second feature of the present invention as recited in independent claim 5, the above described third feature of the present invention as recited in independent claim 9, and the above described fourth feature of the present invention as recited in independent claim 14, and further does not teach or suggest these features in combination with the other limitations recited in each of the independent claims.

Arai et al. (U.S. Patent No. 6,643,667 B1), provides for a System and Method for Replicating Data. Disclosed is a split pair button 1514 that allows a user to copy the contents of a source logical volume to a target logical volume in a pair. A re-sync pair button 1515 enables a user to re-synchronize pairs (see Fig. 11A; and column 10, lines 21-24).

Arai teaches a system and method wherein a pair split button is provided that allows a user to copy the contents of a source logical volume to a target logical volume and re-sync pair button enables a user to re-synchronize the pairs.

However, at no point is there is any teaching or suggestion in Arai of the above described features of the present invention as recited in the claims, wherein an instruction for splitting is received from a first server, the storage control reports an end of the splitting to the first server, receives an instruction for backup from the

second server and then transfers information to a backup device from the second storage unit after copying from the first storage unit to the second storage unit.

More particularly, Arai at a minimum does not teach or suggest the above described first feature of the present invention as recited in independent claim 1, the above described second feature of the present invention as recited in independent claim 5, the above described third feature of the present invention as recited in independent claim 9, and the above described fourth feature of the present invention as recited in independent claim 14, and further does not teach or suggest these features in combination with the other limitations recited in each of the independent claims.

Oka (U.S. Patent Application Publication No. 2004/0010732 A1), provides for a Backup Method and Storage Control Device using the Same. Discussed is a backup method for a storage control device that instructs a storage device 103 to split a primary volume 111 and a copy volume 112 in the storage device 103 and to execute a backup operation from the copy volume to a backup volume (5). When batch tasks for copy volume 112 are completed, a differential copy is performed between the volumes 111, 112 and primary volume 111 and copy volume 112 are put in a linked state (duplex state). After the pair-linking operation, an operation is performed to make the contents of the primary volume 111 and the copy volume 112 consistent (see Fig. 2; abstract; and paragraphs 27, 28).

Oka as described above provides a backup method for a storage device that instructs a storage device to split a primary volume and a copy volume to execute a backup operation from the copy volume to the backup volume.

However, at no point is there any teaching or suggestion in Oka of the above

described features of the present invention as recited in the claims wherein, when an instruction for splitting is received from a first server, the controller reports an end of the spitting to the first server, receives an instruction for backup from the second server and then transfers information to a backup device from the second storage unit after copying information from the first storage unit to the second storage unit.

More particularly, Oka at a minimum does not teach or suggest the above described first feature of the present invention as recited in independent claim 1, the above described second feature of the present invention as recited in independent claim 5, the above described third feature of the present invention as recited in independent claim 9, and the above described fourth feature of the present invention as recited in independent claim 14, and further does not teach or suggest these features in combination with the other limitations recited in each of the independent claims.

Grosner et al. (U.S. Patent Application Publication No. 2004/0044744 A1) provides for a Switching System. Disclosed is an application that supports Network Data Management Protocol (NDMP) and allows serverless backup. The application allows users the ability to backup disk devices to tape devices without a server intervening (see paragraphs 153 and 154).

Grosner as described above discloses an application that supports in the MP and allows users the ability to backup disk devices to tape devices without a server intervening.

However, at no point is there any teaching or suggestion in Grosner of the above described features of the present invention as recited in the claims wherein, when an instruction for splitting is received from the first server, the storage

controller reports an end of the splitting to the first server, receives an instruction for backup from the second server and then transfers information to a backup device from the second storage unit after copying information from the first storage unit to the second storage unit.

More particularly, Grosner at a minimum does not teach or suggest the above described first feature of the present invention as recited in independent claim 1, the above described second feature of the present invention as recited in independent claim 5, the above described third feature of the present invention as recited in independent claim 9, and the above described fourth feature of the present invention as recited in independent claim 14, and further does not teach or suggest these features in combination with the other limitations recited in each of the independent claims.

Honma (U.S. Patent Application Publication No. 2004/0073675) provides a computer system using a Storage Area Network (SAN) and method of handling data in the computer system. Disclosed is a system and method of making a copy of a primary volume by copying primary volumes to secondary volumes. The status of the database management system in an application server is then changed to a backup-allowable state. A backup server makes a backup copy of the data in the secondary volumes to tape units. (See Fig. 4; and paragraph 48).

However, at no point is there any teaching or suggestion in Honma of the above described features of the present invention as recited in the claims, wherein when an instruction for splitting is received from a first server, the controller reports an end of the splitting of the server, receives an instruction for backup from the second server and transmits the information to a backup device from the second

storage unit after copying information from the first storage unit to the second storage unit.

More particularly, Honma at a minimum does not teach or suggest the above described first feature of the present invention as recited in independent claim 1, the above described second feature of the present invention as recited in independent claim 5, the above described third feature of the present invention as recited in independent claim 9, and the above described fourth feature of the present invention as recited in independent claim 14, and further does not teach or suggest these features in combination with the other limitations recited in each of the independent claims.

Therefore, since the cited references at a minimum fail to teach or the above described first feature of the present invention as recited in independent claim 1, the above described second feature of the present invention as recited in independent claim 5, the above described third feature of the present invention as recited in independent claim 9 and the above described fourth feature of the present invention as recited in independent claim 14, and further fail to teach or suggest these features in combination with the other limitations recited in each of the claims, it is submitted that all of the claims are patentable over the cited references whether said references are taken individually or in combination with each other.

(F) Conclusion

Applicant has conducted what it believes to be a reasonable search, but makes no representation that "better" or more relevant prior art does not exist. The United States Patent and Trademark Office is urged to conduct its own complete

search of the prior art, and to thoroughly examine this application in view of the prior art cited herein and any other prior art that the United States Patent and Trademark Office may locate in its own independent search. Further, while Applicant has identified in good faith certain portions of each of the references listed herein in order to provide the requisite detailed discussion of how the claimed subject matter is patentable over the references, the United States Patent and Trademark Office should not limit its review to the identified portions but rather, is urged to review and consider the entirety of each reference, and not to rely solely on the identified portions when examining this application.

In view of the foregoing, Applicant requests that this Petition to Make Special be granted and that the application undergo the accelerated examination procedure set forth in MPEP 708.02 VIII.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C., Deposit Account No. 50-1417 (501.43526X00).

Respectfully submitted,

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CIB/jdc
Enclosures